

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Div of Environmental Health, 11 SHS
(207) 287-5872 Fax: (207) 287-4172

PROPERTY LOCATION		>> CAUTION: LPI APPROVAL REQUIRED <<	
City, Town, or Plantation	LAMOINE	Town/City	LAMOINE
Street or Road	ORCHARD LANE	Permit #	1713
Subdivision, Lot #	LOT #7 APPLEWOOD SHORES SUBDIVISION	Date Permit Issued	9/17/13
OWNER/APPLICANT INFORMATION		Fee: \$	250
Name (last, first, MI)	TONY AND BELCH, ELIZABETH	Double Fee Charged []	
Mailing Address of Owner/Applicant	7 CARLISLE ST. ELLSWORTH, ME 04605	Local Plumbing Inspector Signature	M. M.
Daytime Tel. #	(207) 460-2215	L.P.I. #	1040
OWNER OR APPLICANT STATEMENT		The Subsurface Wastewater Disposal System shall not be installed until a Permit is issued by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.	
I state and acknowledge that the information submitted is correct to the best of my knowledge and understanding and that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.		Municipal Tax Map # 3 Lot # 39-7	
Signature of Owner or Applicant		CAUTION: INSPECTION REQUIRED	
Date 9/11/13		I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.	
		Local Plumbing Inspector Signature	
		(1st) date approved 10/20/13	
		(2nd) date approved 10/23/13	
PERMIT INFORMATION			
TYPE OF APPLICATION		THIS APPLICATION REQUIRES	
<input checked="" type="checkbox"/> 1. First Time System		<input checked="" type="checkbox"/> 1. No Rule Variance	
<input type="checkbox"/> 2. Replacement System		<input type="checkbox"/> 2. First Time System Variance	
Type replaced: _____		a. Local Plumbing Inspector Approval	
Year installed: _____		b. State & Local Plumbing Inspector Approval	
<input type="checkbox"/> 3. Expanded System		<input type="checkbox"/> 3. Replacement System Variance	
a. <25% Expansion		a. Local Plumbing Inspector Approval	
<input type="checkbox"/> 4. Experimental System		b. State & Local Plumbing Inspector Approval	
<input type="checkbox"/> 5. Seasonal Conversion		<input type="checkbox"/> 4. Minimum Lot Size Variance	
SIZE OF PROPERTY		<input type="checkbox"/> 5. Seasonal Conversion Permit	
1.2 SQ. FT. ACRES		DISPOSAL SYSTEM TO SERVE	
SHORELAND ZONING		<input checked="" type="checkbox"/> 1. Single Family Dwelling Unit, No. of Bedrooms: 4	
Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		<input type="checkbox"/> 2. Multiple Family Dwelling, No. of Units: _____	
		<input type="checkbox"/> 3. Other: _____	
		(specify)	
		Current Use Seasonal <input type="checkbox"/> Year Round <input checked="" type="checkbox"/> Undeveloped	
		TYPE OF WATER SUPPLY	
		<input checked="" type="checkbox"/> 1. Filled Well <input type="checkbox"/> 2. Dug Well <input type="checkbox"/> 3. Private	
		4. Public <input type="checkbox"/> 5. Other	
DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)			
TREATMENT TANK		DISPOSAL FIELD TYPE & SIZE	
<input checked="" type="checkbox"/> 1. Concrete		<input type="checkbox"/> 1. Stone Bed <input type="checkbox"/> 2. Stone Trench	
<input checked="" type="checkbox"/> a. Regular		<input checked="" type="checkbox"/> 3. Proprietary Device TYPED	
<input type="checkbox"/> b. Low Profile		a. cluster array <input checked="" type="checkbox"/> c. Linear	
<input type="checkbox"/> 2. Plastic		<input checked="" type="checkbox"/> b. regular load d. H-20 load	
<input type="checkbox"/> 3. Other: _____		<input type="checkbox"/> 4. Other: _____	
CAPACITY: 1000 GAL.		SIZE: 1600 sq. ft. lin. ft.	
SOIL DATA & DESIGN CLASS		DISPOSAL FIELD SIZING	
PROFILE CONDITION		<input type="checkbox"/> 1. Medium—2.6 sq. ft. / gpd	
at Observation Hole # TPI		<input type="checkbox"/> 2. Medium—Large 3.3 sq. ft. / gpd	
Depth 17"		<input checked="" type="checkbox"/> 3. Large—4.1 sq. ft. / gpd	
of Most Limiting Soil Factor		<input type="checkbox"/> 4. Extra Large—5.0 sq. ft. / gpd	
		EFFLUENT/EJECTOR PUMP	
		<input checked="" type="checkbox"/> 1. Not Required	
		<input type="checkbox"/> 2. May Be Required	
		<input type="checkbox"/> 3. Required	
		Specify only for engineered systems:	
		DOSE: _____ gallons	
		DESIGN FLOW	
		<input checked="" type="checkbox"/> 1. No <input type="checkbox"/> 2. Yes <input type="checkbox"/> 3. Maybe	
		If Yes or Maybe, specify one below:	
		a. multi-compartment tank	
		b. _____ tanks in series	
		c. increase in tank capacity	
		d. Filter on Tank Outlet	
		360 gallons per day	
		BASED ON:	
		<input checked="" type="checkbox"/> 1. Table 4A (dwelling unit(s))	
		<input type="checkbox"/> 2. Table 4C (other facilities)	
		SHOW CALCULATIONS for other facilities	
		<input type="checkbox"/> 3. Section 4G (meter readings)	
		ATTACH WATER METER DATA	
		LATITUDE AND LONGITUDE	
		at center of disposal area	
		Lat. 44° 29' 12.4" N	
		Lon. 68° 20' 49.3" W	
		If g.p.s., state margin of error: 10'	
SITE EVALUATOR STATEMENT			
I certify that on 9/29/13 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).			
Site Evaluator Signature		SE # 213	
STEPHEN H. HOWELL		Date 9/04/13	
Site Evaluator Name Printed		Telephone Number (207) 848-5714	
		E-mail Address s.w.howe@engr.com	

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Health & Human Services
Division of Environmental Health
(207) 287-5672 Fax: (207) 287-3165

Town, City, Plantation

Street, Road, Subdivision

Owner's Name

LAMOINE

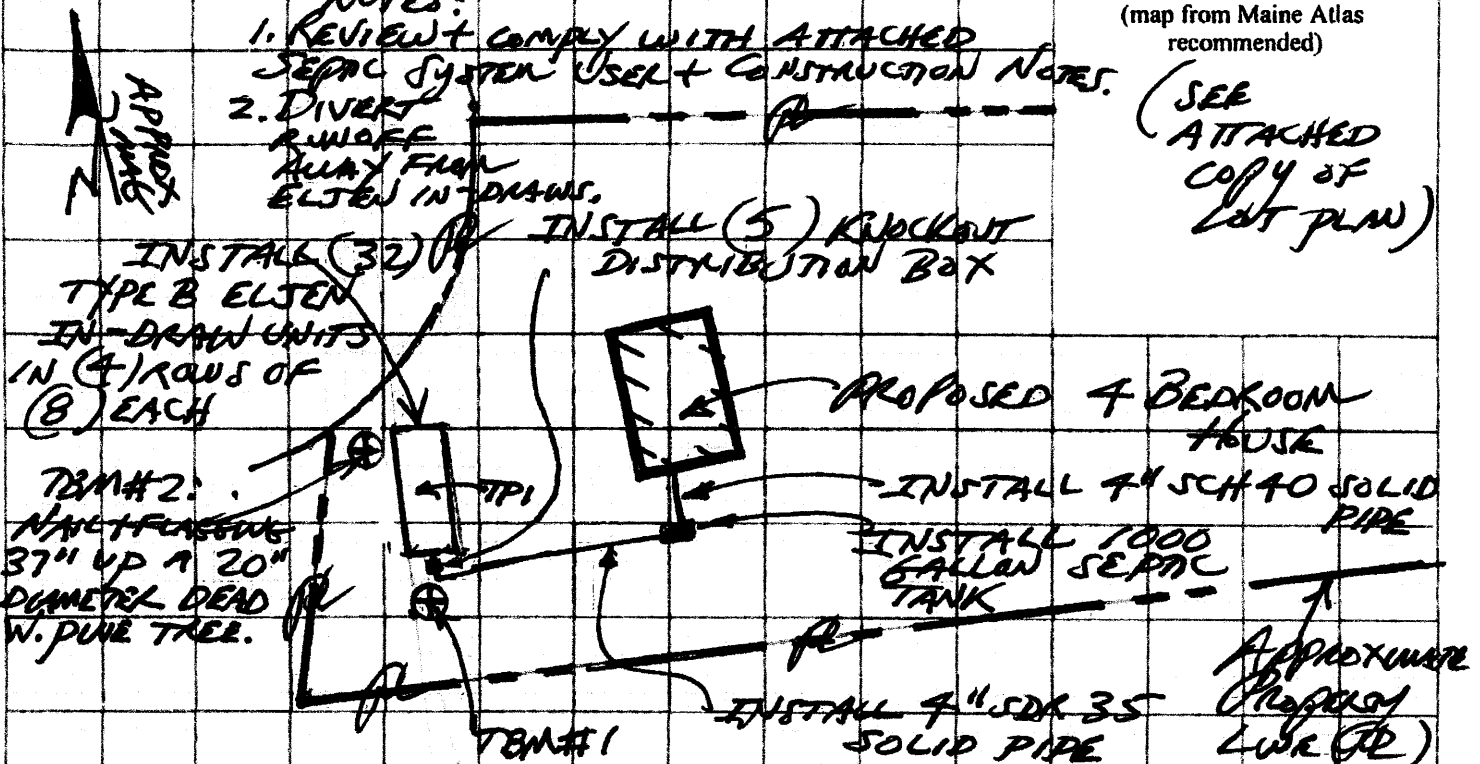
LOT #7
APPLEWOOD SHORES

TONY BELCH

SITE PLAN

Scale 1" = 50 ft. or as shown DIV.

SITE LOCATION PLAN
(map from Maine Atlas recommended)



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole TPI ☒ Test Pit ☐ Boring
1" " Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
VERY FINE SANDY LOAM	FLUVE	BROWN	NONE
SILT LOAM TO SILTY CLAY LOAM	FIRM TO V. FIRM	OLIVE BROWN TO OLIVE	MANY DISTINCT
LIMIT OF ORGANIC = 35"			

Soil Classification 8 C	Slope 5-10%	Limiting Factor 17"	<input checked="" type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
Profile Condition			

Observation Hole ☐ Test Pit ☐ Boring
" Depth of Organic Horizon Above Mineral Soil

Texture	Consistency	Color	Mottling
0			
10			
20			
30			
40			
50			

Soil Classification <u> </u>	Slope <u> </u> %	Limiting Factor <u> </u>	<input type="checkbox"/> Ground Water <input type="checkbox"/> Restrictive Layer <input type="checkbox"/> Bedrock <input type="checkbox"/> Pit Depth
Profile Condition			

Site Evaluator Signature

SE #

Date

#213

9/04/13

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Town, City, Plantation

Street, Road, Subdivision

Owner's Name

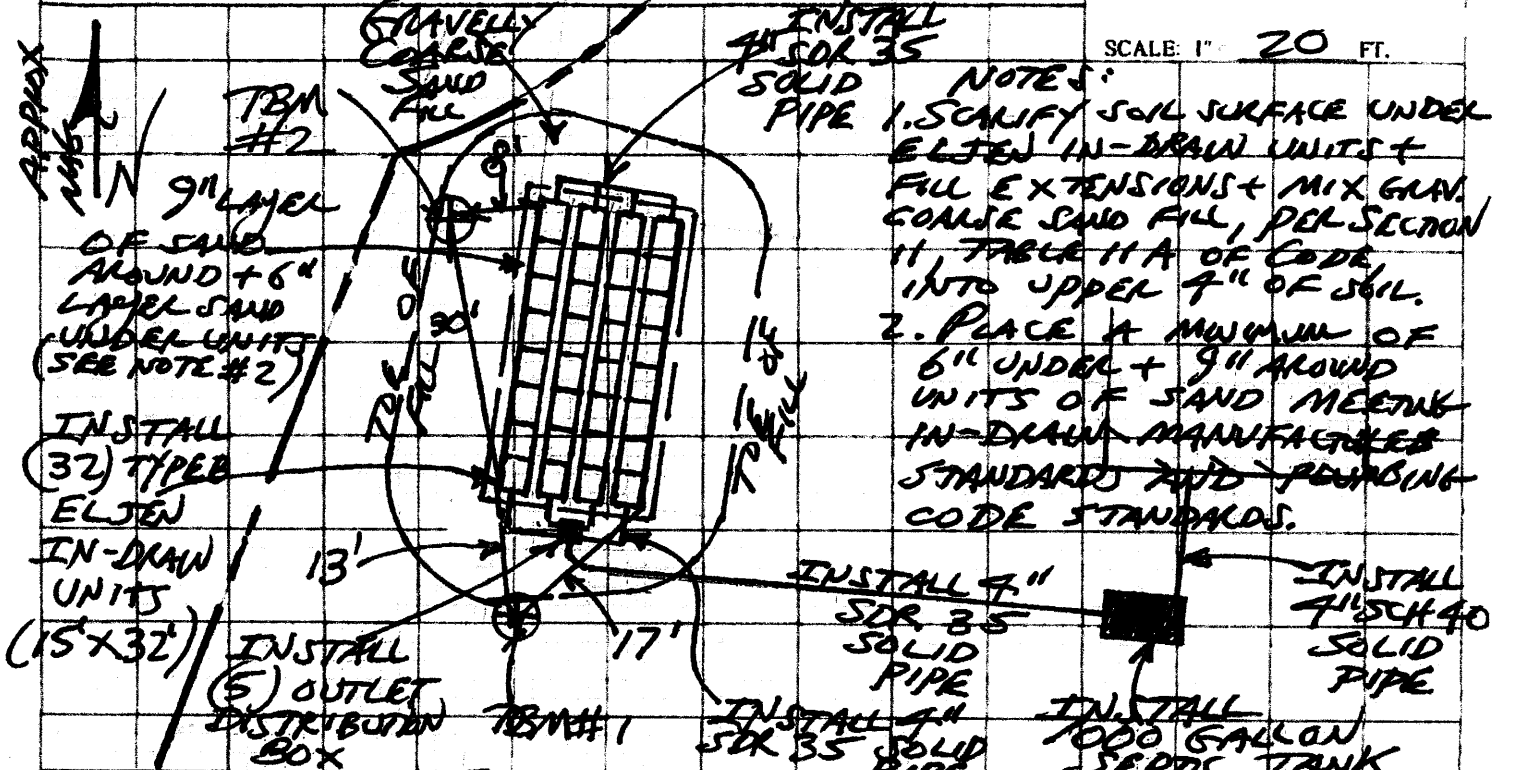
LANOWNE

LOT #4
APPLEWOOD SHORES

TONY BELCH

SUBSURFACE WASTEWATER DISPOSAL PLAN SUBDIV.

SCALE: 1" = 20 FT.



FILL REQUIREMENTS

CONSTRUCTION ELEVATIONS

ELEVATION REFERENCE POINT (TBM#1)

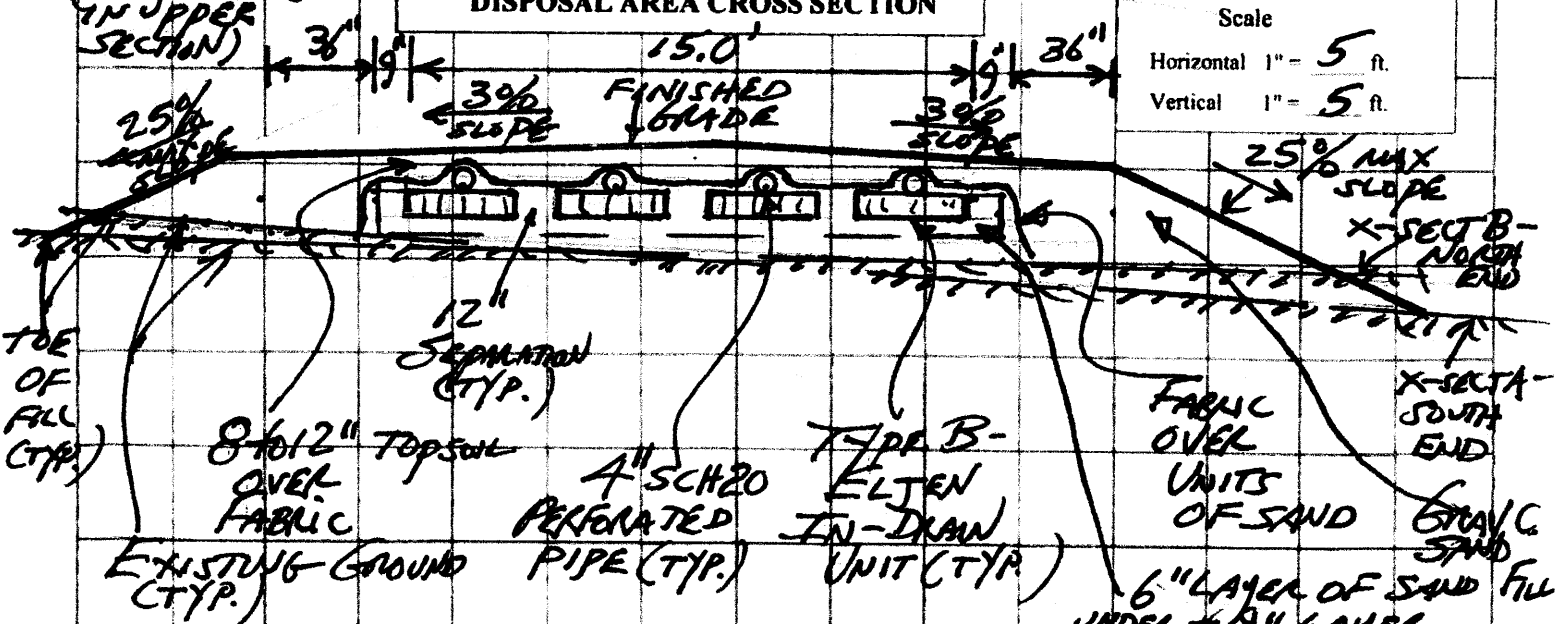
Depth of Fill (Upslope)	29' 31"	Finished Grade Elevation	+ 9"	Location & Description:	NAIL FLAG W. 27" UP A 10" DIAM. W. BUSH
Depth of Fill (Downslope)	29' 36"	Top of Distribution Pipe or Primary Device	- 3"	Reference Elevation	= 0" TREE
		Bottom of Disposal Area (BOTTOM SAND)	- 20"		

DISPOSAL AREA CROSS SECTION

Scale

Horizontal 1" = 5 ft.

Vertical 1" = 5 ft.



Site Evaluator Signature

SE #

Date

213 9/04/13

ALOUND UNITS
(SEE NOTE IN UPPER SECTION)

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2. **Bottom of disposal field:** The bottom of each disposal field must be installed at the elevation specified on the permit. It must be maintained to a level grade no greater than 2 inches within 100 feet. Note: The bottom of a disposal field serves as the final stage of the distribution network.
3. **Avoid unnecessary compaction:** Excavation must be carried out in a manner that will avoid unnecessary compaction of both sidewalls and bottom area. Heavy equipment, especially rubber-tired vehicles such as front-end loaders, should not be driven over the exposed bottom of the disposal field. Excavation should be carried out when possible, by a back-hoe operating from outside the perimeter of the previously excavated portions of the disposal fields.
4. **Reopen smeared or compacted bottom or sidewall surfaces:** If any portion of the bottom or sidewalls becomes smeared or compacted, that portion must be scarified to reopen soil pores. Roto-tilling may be necessary to reach the limit of compacted soil depth.
5. **Weather conditions:** Work should be scheduled so that excavated areas are not exposed to rainfall or wind-blown silt. Any loose soil or debris that is washed or otherwise deposited within the excavation must be carefully removed prior to backfilling. Additionally, disposal fields should not be installed in frozen ground or when the ambient air temperature is below freezing, especially if construction will take place over several days.

D. CONSTRUCTION

1. **Construction:** The installer of the system must make certain that the system and all its component parts are installed in conformance with the requirements of these Rules, the plan prepared by the site evaluator, and with any special engineering design requirements approved or required by the Department, pursuant to an approved variance.
2. **Soil and backfill material:** The installer of the system must make certain that the construction and installation are performed without adversely affecting the capacity of the soil or backfill material to adequately absorb or treat the septic tank effluent.

E. BACKFILL PLACEMENT FOR DISPOSAL AREAS INCLUDING FILL EXTENSIONS

1. **General:** Selection and placement of backfill must comply with the requirements of this Section.
2. **Backfill standards:** The backfill material must be gravelly coarse sand which meets the requirements of Table 11A or 11(E)(2)(a) below, as approved by the Department or LPI:

**TABLE 11A
Backfill Textural Gradation**

Sieve Size	Percent Passing by Weight
3 inches	100
#4	75-100
#10	50-100
#60	10-50
#100	2-20
#200	2-8
Clay Fraction	0-2

- (a) **Field determination of backfill:** Due to the difficulty of obtaining sieve analyses and the variability of backfill material, the following procedures can be used in the field to determine the suitability of backfill material. The backfill is suitable if the soil texture is loose single grains, the individual sand grains can be readily seen (similar to salt or sugar grains) and felt, and the following conditions are observed: If squeezed in the hand when dry, it will fall apart when the pressure is released but has enough fines to stain the lines in the palm of the hand; or, if squeezed when moist, it will form a cast that will crumble when

touched and bears very careful handling; and it does not form a ribbon between the thumb and forefinger but has enough fines to stain the lines in the palm of the hand.

- (b) Coarser material beneath or beside disposal system: Stone meeting the requirements of Section 11(F)(2) may be placed immediately adjacent to the disposal field, provided that the rest of the backfill material meets the requirements of Section 11(E). If used beneath the disposal field, it must be considered part of the disposal field for determining the separation between the limiting factor and the bottom of the disposal system.
 - (c) Fill material placement above disposal system: Immediately above the filter fabric, hay or proprietary devices, fill is required as specified on the plans. It must be a minimum of 8 inches in thickness (including cover material).
 - (d) Cover material: Immediately above the backfill or fill material, at least 4 inches of soil or soil and soil amendment mix, suitable for establishment of a good vegetative cover, must be placed over the entire disturbed soil area, including fill extensions.
3. Disposal fields installed completely in the original ground: If the disposal field is completely installed in original ground, the backfill material must completely cover the disposal fields. The disposal field must be adequately crowned on level disposal fields (3 percent minimum grade) to allow for settling so that surface water will be allowed to drain from the site without ponding.
4. Disposal fields installed partially in the original ground: Disposal fields partially installed in the original ground must meet the following requirements:
- (a) Extent of backfill material: The fill layer must include any backfill beneath the disposal field, the shoulders, and the backfill material extensions surrounding the disposal field on all sides.
 - (b) Shoulder width and slope: The minimum required shoulder width is 3 feet. The finished grade of the shoulder must be sloped at 3 percent away from the disposal field or conform to the slope of the finish grade of the disposal field.
 - (c) Backfill material extension: At the outside edge of the shoulder, the backfill material must be terminated by sloping the top of the backfill layer downward at a slope specified in Tables 11A and 11B, to the original ground if possible, or a man-made retaining wall, provided the retaining wall is no more than 24 inches in height and the horizontal distance from the outer edge of the fill shoulder to the retaining wall is at least 10 feet.

F. DISPOSAL FIELDS

1. Installation requirements: Disposal fields which include in a trench configuration, must be installed in compliance with all the requirements in this Section and Section 6(N).
- (a) Pitch of distribution pipes or proprietary disposal devices: Maximum tolerance of distribution pipes or proprietary disposal devices must be no more than 2 inches in 100 feet.
 - (b) Spacing between distribution pipes: The space between distribution pipes for low pressure distribution must be from 75 to 80 percent of the hole spacing. Spacing must be equal and uniform.
 - (c) Holes in low pressure distribution pipes: The holes in low pressure distribution pipes must be equal and uniform. The holes must be aligned, so that holes in adjacent distribution pipes are offset by 50 percent of the hole spacing.
 - (d) Proprietary devices: Proprietary disposal devices approved by the Department as substitutes for disposal field stone and perforated distribution pipes, must be installed, per the manufacturer's instructions.

SEPTIC SYSTEM USER NOTES

1. This septic system has been designed to meet requirements of the State of Maine Subsurface Wastewater Disposal Rules, 10-144A CMR 241. Because site evaluators are not notified when local ordinances are enacted which exceed state requirements, it is the septic system owner's responsibility to ensure that this septic system design (HHE-200 form) is in compliance with applicable local ordinances. This can be done by contacting your local plumbing inspector and asking about local ordinances which differ from those required in the Rules.
2. It is the septic system owner's responsibility to obtain any local, state, or federal permit(s) that may be required for the installation of this septic system (work within or adjacent to a wetland may require a state and/or federal permit). Contact the Maine Department of Environmental Protection at 287-2111 and the Army Corps of Engineers at 623-8367 if you have any questions.
3. The use of a garbage grinder on a septic system is not recommended. Depending on use patterns, they can contribute a significant amount of particulate matter and grease to the system. Excessive use may result in premature failure. If a garbage grinder is to be used, additional septic tank capacity, a multi compartment septic tank is required, and/or more frequent septic tank pumping is recommended.
4. For new construction, it is recommended that the septic system owner install low volume toilets (1 1/2 gallons per flush or less) and other flow reducing fixtures such as low volume shower heads and faucets to minimize water consumption. A reduction in water usage will generally result in extended life of your septic system.
5. It is the septic system owner's responsibility to limit water consumption and wastewater generation so that the septic system design capacity (design flow on the HHE-200 form) is not exceeded on any day. Activities which generate large amounts of wastewater should be spread out over several days where possible. Excessive use of a septic system on any day can cause the system to fail even though your use, averaged over a week or month, is below design volume.
6. Do not connect floor or roof drains to a septic system. Your septic system is not designed to handle this water and it will likely cause premature failure.
7. Do not dispose of backwash from water softeners or water treatment devices in your septic system. Large amounts of water can be generated from these devices which can overload a septic system.
8. Do not dispose of any hazardous or toxic substances in a septic system such as paint thinner, paints, varnishes, photographic solutions, pesticides, insecticides, organic solvents or degreasers and drain openers. Septic systems depend on living organisms to function properly. Toxic or hazardous material can, in effect, "kill" the system and are a threat to pollution of surface or groundwater resources. Instead of using a commercial degreaser or drain opener, which can be toxic, use one of the following:
 - A. A plunger or mechanical snake; or
 - B. Pour one handful of baking soda and 1/2 cup of white vinegar down the drainpipe and cover tightly for one minute. Repeat as necessary; or

- C. Pour 1/2 cup salt and 1/2 cup baking soda down the drain followed by 6 cups of boiling water. Let sit for several hours or overnight, then flush with water.
9. Do not dispose of any inert or non-biodegradable substances into your septic system such as disposable diapers, cat box litter, coffee grounds, cigarette filters, sanitary napkins, facial tissues and wet strength paper towels.
 10. Do not dispose of large quantities of fats or grease into your septic system unless an external grease trap has been designed for that purpose. Generally, an internal grease trap is inadequate to handle excessive amounts of grease or fat.
 11. Do not add any septic tank cleaner or additive to your septic system to improve its function or prolong its useful operating life (this includes yeast, horse manure or commercial products). No effective product or material is recognized by State authorities and, in fact, some of these products can actually cause your septic system to fail.
 12. Maintain your septic system by regularly having the septic tank pumped. Some biological breakdown of solids and grease occurs in septic tanks but the rate of accumulation virtually always exceeds the rate of biologic breakdown. If your septic tank is not pumped out often enough, solids and greases may build up to the point where they enter your disposal areas. Once this material reaches the disposal area, it will clog the soil surface and likely cause premature failure.
 13. We recommend having your septic tank pumped or inspected after one year of use. The pumper can advise you of how often you need to have the septic tank pumped based on what he finds at this inspection (typically a septic tank will need to be pumped every two to five years). Keep in mind that you will need to adjust pumping frequency to coincide with changes in the way you use your system. The more your septic system is used, the more frequently that the septic tank should be pumped.
 14. Do not drive over or store heavy materials on any part of your septic system unless it is specifically designed to handle heavy loads. Otherwise, crushed components may be the result and the system may fail.
 15. Divert all surface water away from the septic tank and disposal area. Roof areas which contribute runoff water to the septic system site should have gutters installed to divert that water to another location.
 16. **PLEASE** – If you have any questions about your septic system or how to use it, call me (848-5714) and ask for advice. You can also call the State Agency responsible for regulating septic systems, the plumbing program in the Division of Health Engineering, at 287-5689.